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|-------------------------------|------------------------|---------------------|------------|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |            |
|                               | 10/780,534             | KONDO, KATSUFUMI    |            |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |            |
|                               | Johannes P. Mondt      | 2826                | <b>NJP</b> |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/22/05.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 17 February 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) of JP 2003-100000
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

  
**NATHAN J. FLYNN**  
 SUPERVISORY PATENT EXAMINER  
 TECHNOLOGY CENTER 2800

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

## **DETAILED ACTION**

### ***Response to Amendment***

Amendment filed 2/22/05 forms the basis for this office action. In said Amendment Applicant substantially amended all previously outstanding claims 1-20 and added new claims 21 and 22.

### ***Response to Arguments***

The amendment is deemed persuasive in that it overcomes the art rejections based on the art of semiconductor laser diodes: although a semiconductor laser diode is a semiconductor diode that is light emitting, the term "semiconductor light emitting diode", unlike "semiconductor light emitting device", has acquired a meaning exclusive to semiconductor diodes that emit light through spontaneous emission rather than light amplification by stimulated emission as in all semiconductor laser diodes. The present office action has been taken after extensive further search and consideration restricted and focused on the semiconductor light emitting diode art.

## **REASONS FOR ALLOWANCE**

### **Claims 1-22 are allowed.**

1. The following is an examiner's statement of reasons for allowance: previously applied art no longer applies because of the amendment: the entire specification and the present claim language are exclusively drawn to a semiconductor light emitting diode (LED) which in the art is distinct and separate from a semiconductor laser diode,

although a semiconductor laser diode is a semiconductor diode that emits light. A further search has not revealed any prior art. Closely related art are:

(a) Kurihara (5,345,092), teaching active layer 51 surrounded by current blocking layer 2. Light emitted by the semiconductor light emitting layer 51 could reach the outside not only through the second layer but also through the first layer. However, current blocking layer 2 is not on first layer 3 while substrate 1, being of GaAs and of a thickness of 100  $\mu\text{m}$ , does not allow light to go through. Furthermore, first layer 3 has no electrode provided on its backside;

(b) Yamada et al (Electronics Letters, Volume 24, No. 2 (1988)), teaching active layer (shaded area of Zn-doped region in Figure 1a) but light output is only through the top (see Figures 1a and 2) while a replacement of the GaAs substrate to one transparent to 905 nm is non-obvious for reasons of motivation and selection.

The claimed subject matter of new claims 21 and 22 are disclosed in the specification on page 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johannes P. Mondt whose telephone number is 571-272-1919. The examiner can normally be reached on 8:00 - 18:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM

May 14, 2005